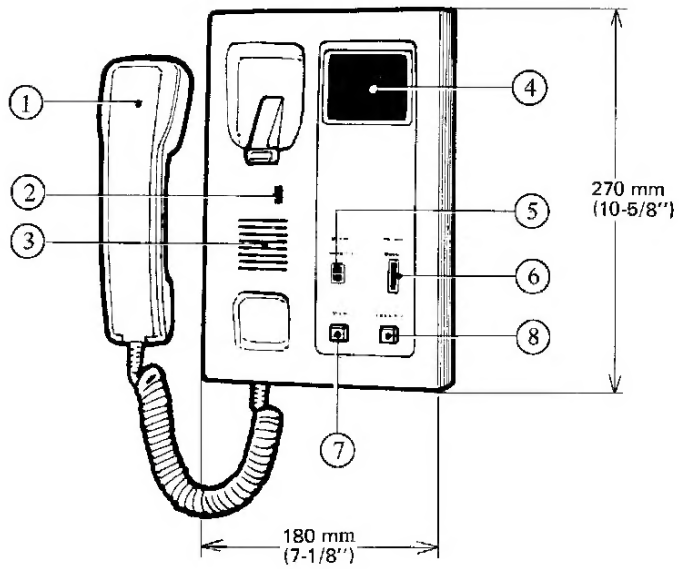
VIDEO INTERCOM SYSTEM

MODEL: MA-1A *(room station with video monitor)*

— INSTRUCTIONS —

MA-1A



NAMES & FUNCTIONS

1. Handset
2. Volume control for call tone & monitoring
3. Loudspeaker for outside monitoring
4. Video monitor
5. Contrast control (3-level)
6. Brightness control
7. Electric door release button
8. Monitor button

FEATURES

* Thin and compact design.
* Quick response room station. Room station video monitor displays image of caller immediately after call tone sounds.
* Monitor button allows you to both see and hear outside without warning the caller.
* Room station for either semi-flush or surface mounting.
* Simple wiring by one coaxial cable plus one pair for illumination lamp.
* Door release button activates electric door strike.
* Extension chime call speaker may be installed in system.

SPECIFICATIONS

* Power source: DC-24V. Use PS-24M Power Supply Adaptor.
* Current consumption: 1A maximum with illumination lamp. 0.25A in standby mode.
* CRT (Cathode Ray Tube): 1.5 CRT (2.25 CRT through lens).
* Resolution: Vertical . . . . . more than 250 lines. Horizontal . . . . . more than 250 lines.
* Carrier frequency: Transmission . . . . . 6.5 MHz. Reception . . . . . 6.0 MHz.
* Communication: Simultaneous with handset.
* Calling: 4-stroke electronic chime.
* Wiring: One coaxial cable plus a pair for illumination lamp.
  2 wires from MA-1A to PS-24M power supply (polarized).
  2 wires from MA-1A to IBR-1 extension call speaker.
  2 wires from MA-1A to MAW-B relay box.
* Wiring distance:

Audio/Video

Coaxial cable	3C-2V	5C-2V
Max. distance	100 m	300 m

Coaxial cable (size of core conductor)	RG-59/U (22GA)	RG-59/U (20GA)
Max. distance	600′	1,000′

***Coaxial cable requirements on page 5 must be met.**

Illumination lamp

Wire gauge	0.8 mm dia.	1.2 mm dia.	1.6 mm dia.
Max. distance	100 m	200 m	300 m
Wire gauge	20 AWG	16 AWG	14 AWG
Max. distance	330′	660′	1,000′

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COMPONENTS AVAILABLE FOR USE WITH YOUR VIDEO INTERCOM SYSTEM

MA-D, Door station with camera, illumination lamp & beam sensor.

MA-DC, Door station with camera & beam censor, but without illumination lamp.

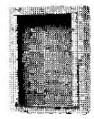
MA-1A, Room station with video monitor, and door release button.

PS-24M, Power supply adaptor, DC-24V, 1.5A.

MAW-B, Relay box for additional light.

EL-9S, Electric door release.

IBR-1, Extension chime call speaker.



MAW-J, Flush mounting back box.

MAW-R, Surface mounting box for door stations MA-D and MA-DC.

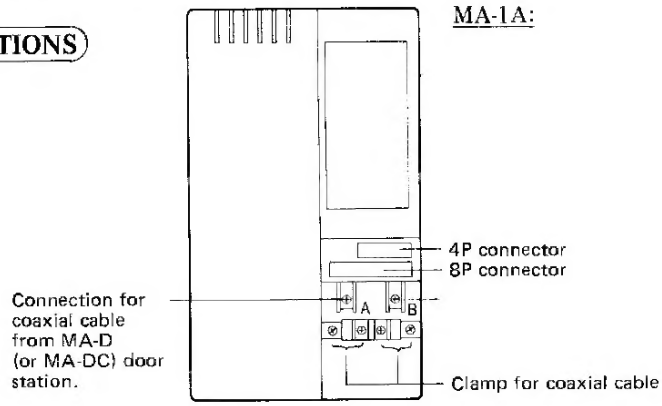
MAW-RA, Surface mounting box for room station MA-1A.

INSTALLATION

Do not attempt to install your intercom system until you have read and thoroughly understood the installation procedure. Aiphone's warranty is void if system is installed in a manner other than described in this manual.

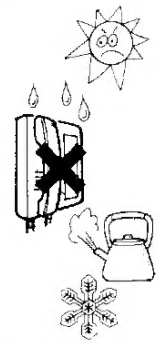
ACTUAL TERMINAL LOCATIONS

MA-1A:

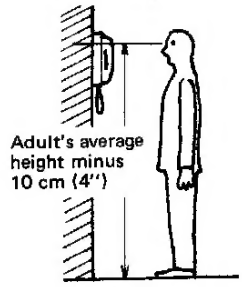


INSTALLATION LOCATION REQUIREMENTS

* Avoid to install MA-1A room station in a place where it is exposed to direct sun light, air conditioner heat, frost, vapor, water, dust chemicals or iron dust, etc..



* Determine MA-1A installation height so that the center of the video monitor would be at the standard eye level: adults' average height minus 10 cm (4").



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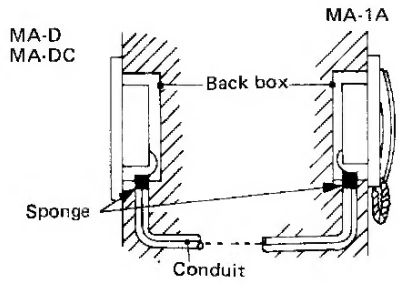
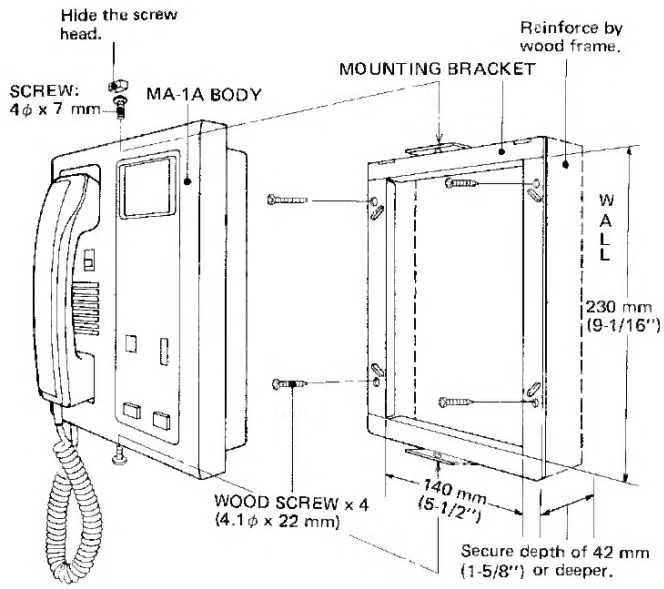
* When using conduit for running cable, please put sponge or the like at both ends to avoid acoustic feedback through the conduit.



MA-1A ROOM STATION INSTALLATION

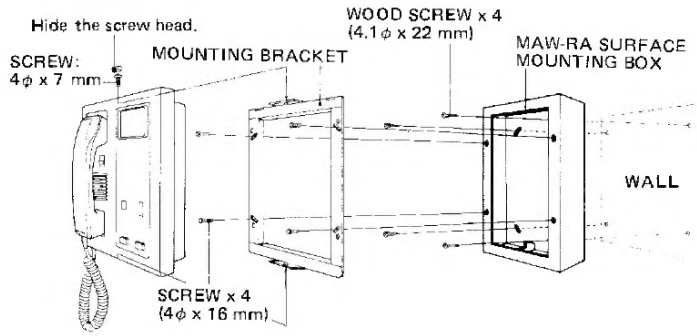
(1) SEMI-FLUSH MOUNTING TO WALL

1. Use a template to open a hole of H: 230 mm x W: 140 mm (H: 9-1/16" x W: 5-1/2"), securing depth of 42 mm (1-5/8") or deeper.
2. Reinforce sides of the mounting frame by wood frames, so that the mounting frame be secured firmly to wall.
3. Attach the mounting frame to wall with 4 wood screws, so as to be fitted vertically to wall.
4. Connect coaxial cable. Plug in connector (male) after connecting cable by wire nuts.
5. Fit the MA-1A unit to the mounting frame and attach top and bottom of the unit by 2 screws.
6. Hide the head of the upper screw by the stuff provided.


Hide the screw head.
Reinforce by wood frame.
MOUNTING BRACKET
SCREW: 4φ x 7 mm
MA-1A BODY
WALL
230 mm (9-1/16")
WOOD SCREW x 4 (4.1φ x 22 mm)
140 mm (5-1/2")
Secure depth of 42 mm (1-5/8") or deeper.

(2) SURFACE MOUNTING TO WALL

1. Attach MAW-RA surface mounting box to wall with 4 wood screws.
2. Attach the mounting frame to surface mounting box by 4 screws.
3. Connect coaxial cable. Remove connector (female) and connect to wires by wire nuts and plug in to connector (male) on MA-1A.
4. Fit the MA-1A unit to the mounting frame and attach top and bottom of the unit by 2 screws.
5. Hide the head of the upper screw by the stuff provided.


Hide the screw head.
WOOD SCREW x 4 (4.1φ x 22 mm)
MAW-RA SURFACE MOUNTING BOX
SCREW: 4φ x 7 mm
MOUNTING BRACKET
WALL
SCREW x 4 (4φ x 16 mm)

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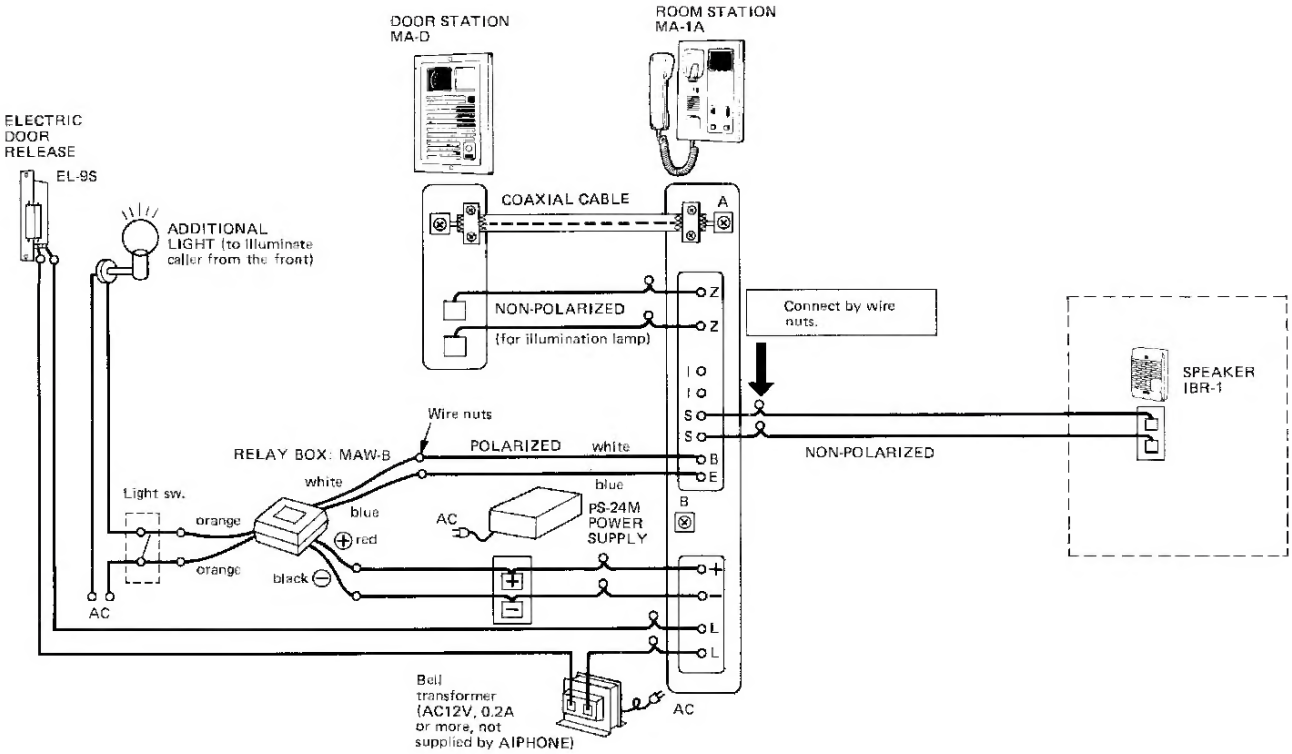
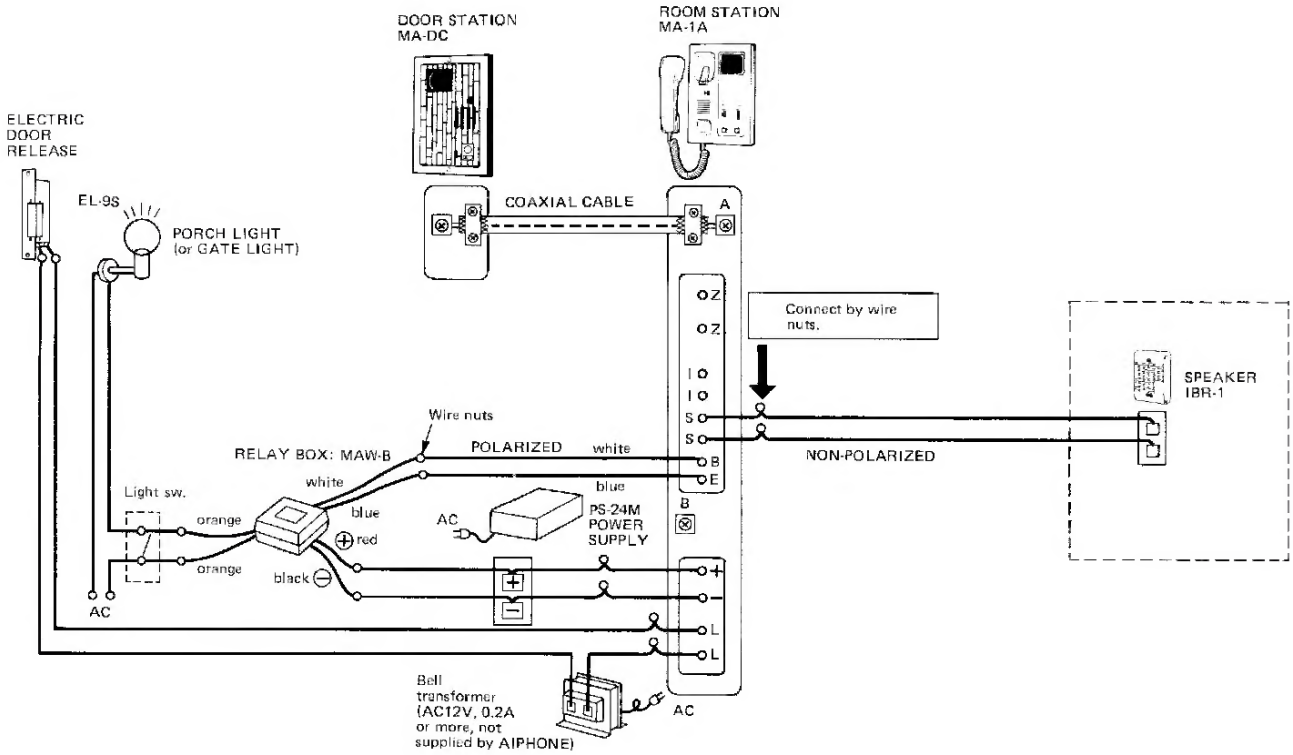
WIRING DIAGRAM

1) MA-1A SYSTEM WITH MA-D DOOR STATION



2) MA-1A SYSTEM WITH MA-DC DOOR STATION



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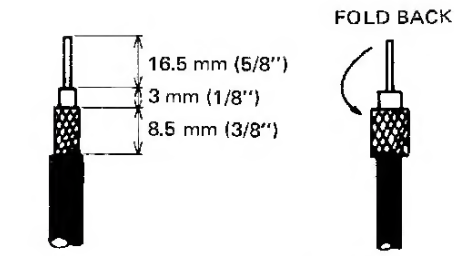
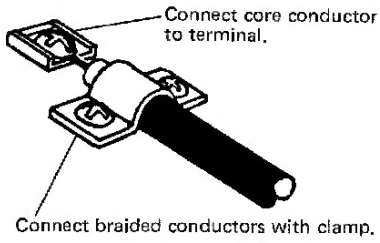
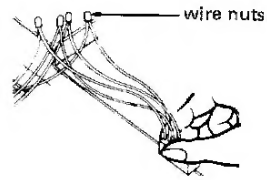
COAXIAL CABLE CONNECTION





- **COAXIAL CABLE REQUIREMENTS:**
  Use 5C-2V or 3C-2V OR RG-59/U which must meet the following specifications;
  * Both core and braided conductors must be of copper.
  * Impedance: 75 ohm.
  * **Permitted closed loop DC resistance: 14 ohm.**
  * Permitted attenuation: 6 dB at 4MHz.
  * Cable sheath size should not exceed 7.4mm (5/16").
- When using 3C-2V, strip the insulation and fold back the braided conductors as shown to avoid shorting to core conductor.

▪ CONNECTING WIRES



CONNECTING ELECTRIC DOOR RELEASE: EL-9S

* A separate bell transformer (AC 12V, 0.2A or more) is required to power EL-9S door release.
* Connect a pair of wires from terminals [L] , [L] on MA-1A room station to EL-9S by wire nuts.
* Your MA-1A room station will operate other brands of door release. It is recommended they do not exceed 12V, 0.3A.

CONNECTING EXTENSION CALL SPEAKER: IBR-1

* Aiphone offers IBR-1 optional speaker for signalling chime call from MA-D door station to a place remote from MA-1A room station. Also, the monitoring sound can be heard from IBR-1 speaker.
* A reply from IBR-1 can not be made.
* Connect a pair of wires from terminals [S] , [S] on MA-1A room station to IBR-1 speaker.
* One IBR-1 may be used per system.

CONNECTING MAW-B RELAY BOX

When door station must be installed in a place where a caller is strongly backlighted, an additional light must be installed in conjunction with MAW-B relay box to illuminate caller from the front.

Connect white and blue leads of MAW-B to [B] , [E] terminals of MA-1A by wire nuts. Connect orange wires of MAW-B to the light switch. Incorrect wiring will cause permanent damage to MAW-B relay box.

* Specifications;

Power source:	DC-24V. Extended from PS-24M power supply.
Relay contact capacity:	Use incandescent lamps for general lighting service of less than 100W.
Wiring:	2-wires (polarized) between MAW-B and MA-1A room station.
	2-wires (polarized) between MAW-B and PS-24M power supply.
Wiring distance:	Up to 80 m (26') with 0.65 mm dia. (22 AWG) wires between MAW-B and PS-24M.

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OPERATIONS

• ANSWERING AT ROOM STATION

Pick up the handset and talk.

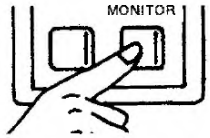
* After 4-stroke chime sounds, picture appears. Pick up the handset and talk to the person in the picture.
* Timer circuit shuts off the picture and voice communication automatically approximately one minute after you pick up the handset to answer. You can turn on the circuit again by depressing the monitor button.
* If you do not answer when you are called, the picture goes off approximately 20 seconds after the chime is heard.

• RELEASING DOOR LOCK

Depress and hold down electric door release button.

* While the door release button is held down, the door release will remain open, and a buzzing sound is heard at the door.
* When the door release button is released, the door is locked again.

• MONITORING THE DOOR STATION

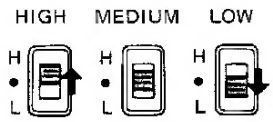


Momentarily depress MONITOR button.

* Picture and sound come ON by depressing the monitor button. You can watch and listen to the outside through the door station without picking up the handset.
* In the monitoring mode, the master station cannot be heard at the door station, and may pick up handset for talking to door station, if necessary.
* Master station can receive a call from the door station while monitoring.
* When you need to stop monitoring, pick up the handset once and hang up.
* Approximately one minute after the monitor button is depressed, the master station turns back to standby mode automatically.

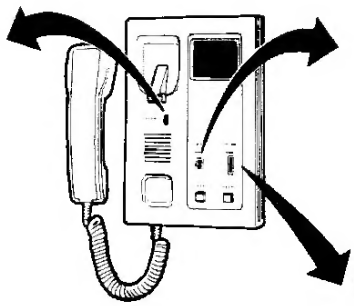
ADJUSTING CALL TONE VOLUME

* Call tone volume can be adjusted to 3 levels as desired.
* Adjusts both call tone and monitor sound.
* Does not adjust call extension speaker volume.



ADJUSTING CONTRAST

The picture contrast may be adjusted to 3 levels as desired.



ADJUSTING BRIGHTNESS

BRIGHT
DARK

Turn the knob upward to make picture brighter.

NOTES: (1) To obtain the best picture, please set contrast switch to DAY position during day time, and to NIGHT position during the night, and then adjust brightness.
(2) Please adjust chime volume while MA-1A is in standby mode.

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